

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

## Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID: ssspta1600kxc

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 Feb 24 PCTGEN now available on STN  
NEWS 4 Feb 24 TEMA now available on STN  
NEWS 5 Feb 26 NTIS now allows simultaneous left and right truncation  
NEWS 6 Feb 26 PCTFULL now contains images  
NEWS 7 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results  
NEWS 8 Mar 24 PATDPAFULL now available on STN  
NEWS 9 Mar 24 Additional information for trade-named substances without  
structures available in REGISTRY  
NEWS 10 Apr 11 Display formats in DGENE enhanced  
NEWS 11 Apr 14 MEDLINE Reload  
NEWS 12 Apr 17 Polymer searching in REGISTRY enhanced  
NEWS 13 SEP 09 CA/CAplus records now contain indexing from 1907 to the  
present  
NEWS 14 Apr 21 New current-awareness alert (SDI) frequency in  
WPIDS/WPINDEX/WPIX  
NEWS 15 Apr 28 RDISCLOSURE now available on STN  
NEWS 16 May 05 Pharmacokinetic information and systematic chemical names  
added to PHAR  
NEWS 17 May 15 MEDLINE file segment of TOXCENTER reloaded  
NEWS 18 May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated  
NEWS 19 May 19 Simultaneous left and right truncation added to WSCA  
NEWS 20 May 19 RAPRA enhanced with new search field, simultaneous left and  
right truncation  
NEWS 21 Jun 06 Simultaneous left and right truncation added to CBNB  
NEWS 22 Jun 06 PASCAL enhanced with additional data  
NEWS 23 Jun 20 2003 edition of the FSTA Thesaurus is now available  
NEWS 24 Jun 25 HSDB has been reloaded  
NEWS 25 Jul 16 Data from 1960-1976 added to RDISCLOSURE  
NEWS 26 Jul 21 Identification of STN records implemented  
NEWS 27 Jul 21 Polymer class term count added to REGISTRY  
NEWS 28 Jul 22 INPADOC: Basic index (/BI) enhanced; Simultaneous Left and  
Right Truncation available  
NEWS 29 AUG 05 New pricing for EUROPATFULL and PCTFULL effective  
August 1, 2003  
NEWS 30 AUG 13 Field Availability (/FA) field enhanced in BEILSTEIN  
NEWS 31 AUG 15 PATDPAFULL: one FREE connect hour, per account, in  
September 2003  
NEWS 32 AUG 15 PCTGEN: one FREE connect hour, per account, in  
September 2003  
NEWS 33 AUG 15 RDISCLOSURE: one FREE connect hour, per account, in  
September 2003  
NEWS 34 AUG 15 TEMA: one FREE connect hour, per account, in  
September 2003  
NEWS 35 AUG 18 Data available for download as a PDF in RDISCLOSURE  
NEWS 36 AUG 18 Simultaneous left and right truncation added to PASCAL

NEWS 37 AUG 18 FROSTI and KOSMET enhanced with Simultaneous Left and Right Truncation  
NEWS 38 AUG 18 Simultaneous left and right truncation added to ANABSTR  
  
NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT  
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),  
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 16:53:38 ON 14 SEP 2003

=> file medline biosis scisearch cancerlit lifesci biotechds caplus  
COST IN U.S. DOLLARS SINCE FILE TOTAL  
ENTRY SESSION  
FULL ESTIMATED COST 0.21 0.21

FILE 'MEDLINE' ENTERED AT 16:54:13 ON 14 SEP 2003

FILE 'BIOSIS' ENTERED AT 16:54:13 ON 14 SEP 2003  
COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC. (R)

FILE 'SCISEARCH' ENTERED AT 16:54:13 ON 14 SEP 2003  
COPYRIGHT 2003 THOMSON ISI

FILE 'CANCERBLIT' ENTERED AT 16:54:13 ON 14 SEP 2003

FILE 'LIFESCI' ENTERED AT 16:54:13 ON 14 SEP 2003  
COPYRIGHT (C) 2003 Cambridge Scientific Abstracts (CSA)

FILE 'BIOTECHDS' ENTERED AT 16:54:13 ON 14 SEP 2003  
COPYRIGHT (C) 2003 THOMSON DERWENT AND INSTITUTE FOR SCIENTIFIC INFORMATION

FILE 'CAPLUS' ENTERED AT 16:54:13 ON 14 SEP 2003  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

```
=>
=> pctfull uspatfull europatfull
PCTFULL IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
```

FULL ESTIMATED COST

42.47

42.68

FILE 'PCTFULL' ENTERED AT 17:24:17 ON 14 SEP 2003  
COPYRIGHT (C) 2003 Univentio

FILE 'USPATFULL' ENTERED AT 17:24:17 ON 14 SEP 2003  
CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'EUROPATFULL' ENTERED AT 17:24:17 ON 14 SEP 2003  
COPYRIGHT (c) 2003 WILA Verlag Muenchen (WILA)

=> s (nk or (natural(w)killer))(w)cell#  
L1 11572 (NK OR (NATURAL(W) KILLER))(W) CELL#

=> s heat(w)shock(w)protein# or hsp##  
L2 14866 HEAT(W) SHOCK(W) PROTEIN# OR HSP##

=> s soluble(5a)l2  
L3 126 SOLUBLE(5A) L2

=> s l1 and l3  
L4 20 L1 AND L3

=> d ibib tot

L4 ANSWER 1 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN  
ACCESSION NUMBER: 2003068822 PCTFULL ED 20030903 EW 200334  
TITLE (ENGLISH): DE-IMMUNIZED (POLY) PEPTIDE CONSTRUCTS  
TITLE (FRENCH): CONSTRUCTIONS (POLY) PEPTIDIQUES DESIMMUNISEES  
INVENTOR(S): ZOCHER, Marcel, Friedrich-Heckerstr. 34, D-79539  
Loerrach, DE [DE, DE];  
DREIER, Torsten, Johann-Clanze-Strasse 39, D-81369  
Muenchen, DE [DE, DE];  
BAeUERLE, Patrick, Waldpromenade 18C, D-82131 Gauting,  
DE [DE, DE]

PATENT ASSIGNEE(S): MICROMET AG, Staffelseestrasse 2, D-81477 Muenchen, DE  
[DE, DE], for all designates States except US;  
ZOCHER, Marcel, Friedrich-Heckerstr. 34, D-79539  
Loerrach, DE [DE, DE], for US only;  
DREIER, Torsten, Johann-Clanze-Strasse 39, D-81369  
Muenchen, DE [DE, DE], for US only;  
BAeUERLE, Patrick, Waldpromenade 18C, D-82131 Gauting,  
DE [DE, DE], for US only

AGENT: VOSSIUS & PARTNER\$, Siebertstrasse 4, D-81765 Muenchen\$,  
DE

LANGUAGE OF FILING: English

LANGUAGE OF PUBL.: English

DOCUMENT TYPE: Patent

PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2003068822	A2	20030821

DESIGNATED STATES

W:

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR  
CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID  
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD  
MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG  
SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW  
GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

RW (ARIPO):

AM AZ BY KG KZ MD RU TJ TM

RW (EAPO):

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU

RW (EPO):

MC NL PT SE SI SK TR

RW (OAPI):

BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2003-EP1389 A 20030212  
PRIORITY INFO.: EP 2002-02003332.0 20020213

L4 ANSWER 2 OF 20 PCTFULL COPYRIGHT 2003 Univentio on STN  
ACCESSION NUMBER: 2003042661 PCTFULL ED 20030530 EW 200321  
TITLE (ENGLISH): METHODS OF DIAGNOSIS OF CANCER, COMPOSITIONS AND  
METHODS OF SCREENING FOR MODULATORS OF CANCER  
METHODES DE DIAGNOSTIC DU CANCER, COMPOSITIONS ET  
METHODES DE CRIBLAGE DES MODULATEURS DU CANCER  
TITLE (FRENCH):  
INVENTOR(S): AFAR, Daniel, 435 Visitacion Avenue, Brisbane, CA  
94005, US [CA, US];  
AZIZ, Natasha, 411 California Avenue, Palo Alto, CA  
94306, US [US, US];  
GINSBURG, Wendy, M., 655 Page Street, San Francisco, CA  
94117, US [US, US];  
GISH, Kurt, C., 37 Artuna Avenue, Piedmont, CA 94611,  
US [US, US];  
GLYNNE, Richard, 2691 Palomino Circle, La Jolla, CA  
92037, US [GB, US];  
HEVEZI, Peter, A., 1360 11th Avenue, San Francisco, CA  
94122, US [GB, US];  
MACK, David, H., 2076 Monterey Avenue, Menlo Park, CA  
94025, US [US, US];  
MURRAY, Richard, 22643 Woodridge Court, Cupertino, CA  
95014, US [US, US];  
WATSON, Susan, R., 805 Balra Drive, El Cerrito, CA  
94530, US [GB, US];  
WILSON, Keith, E., 219 Jeter Street, Redwood City, CA  
94062, US [US, US];  
ZLOTNIK, Albert, 507 Alger Drive, Palo Alto, CA 94306,  
US [US, US]  
PATENT ASSIGNEE(S): EOS BIOTECHNOLOGY, INC., 225A Gateway Boulevard, South  
San Francisco, CA 94080, US [US, US], for all  
designates States except US;  
AFAR, Daniel, 435 Visitacion Avenue, Brisbane, CA  
94005, US [CA, US], for US only;  
AZIZ, Natasha, 411 California Avenue, Palo Alto, CA  
94306, US [US, US], for US only;  
GINSBURG, Wendy, M., 655 Page Street, San Francisco, CA  
94117, US [US, US], for US only;  
GISH, Kurt, C., 37 Artuna Avenue, Piedmont, CA 94611,  
US [US, US], for US only;  
GLYNNE, Richard, 2691 Palomino Circle, La Jolla, CA  
92037, US [GB, US], for US only;  
HEVEZI, Peter, A., 1360 11th Avenue, San Francisco, CA  
94122, US [GB, US], for US only;  
MACK, David, H., 2076 Monterey Avenue, Menlo Park, CA  
94025, US [US, US], for US only;  
MURRAY, Richard, 22643 Woodridge Court, Cupertino, CA  
95014, US [US, US], for US only;  
WATSON, Susan, R., 805 Balra Drive, El Cerrito, CA  
94530, US [GB, US], for US only;  
WILSON, Keith, E., 219 Jeter Street, Redwood City, CA  
94062, US [US, US], for US only;  
ZLOTNIK, Albert, 507 Alger Drive, Palo Alto, CA 94306,  
US [US, US], for US only  
AGENT: BASTIAN, Kevin, L.\$, Townsend and Townsend and Crew  
LLP, Two Embarcadero Center, Eighth Floor, San  
Francisco, CA 94111\$, US  
LANGUAGE OF FILING: English  
LANGUAGE OF PUBL.: English  
DOCUMENT TYPE: Patent  
PATENT INFORMATION:

	NUMBER	KIND	DATE
DESIGNATED STATES	WO 2003042661	A2	20030522
W:	AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW		
RW (ARIPO):	GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW		
RW (EAPO):	AM AZ BY KG KZ MD RU TJ TM		
RW (EPO):	AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR		
RW (OAPI):	BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG		
APPLICATION INFO.:	WO 2002-US36810	A	20021113
PRIORITY INFO.:	US 2001-60/350,666		20011113
	US 2001-60/332,464		20011121
	US 2001-60/334,393		20011129
	US 2001-60/335,394		20011203
	US 2001-60/340,376		20011214
	US 2002-60/347,211		20020108
	US 2002-60/347,349		20020110
	US 2002-60/347,349		20020208
	US 2002-60/356,714		20020213
	US 2002-60/359,077		20020220
	US 2002-60/368,809		20020329
	US 2002-60/370,110		20020404
	US 2002-60/372,246		20020412
	US 2002-60/386,614		20020605
	US 2002-60/396,839		20020716
	US 2002-60/397,775		20020722
	US 2002-60/397,845		20020722
	US 2002-60/409,450		20020909

L4 ANSWER 3 OF 20  
 ACCESSION NUMBER: PCTFULL COPYRIGHT 2003 Univentio on STN  
 2003025138 PCTFULL ED 20030402 EW 200313  
 TITLE (ENGLISH): METHODS OF DIAGNOSIS OF CANCER COMPOSITIONS AND METHODS  
 OF SCREENING FOR MODULATORS OF CANCER  
 PROCEDES DE DIAGNOSTIC DU CANCER, COMPOSITIONS ET  
 PROCEDES DE CRIBLAGE DE MODULATEURS DU CANCER  
 INVENTOR(S): AFAR, Daniel, 435 Visitacion Avenue, Brisbane, CA  
 94005, US [CA, US];  
 AZIZ, Natasha, 411 California Avenue, Palo Alto, CA  
 94306, US [US, US];  
 GISH, Kurt, C., 37 Artuna Avenue, Piedmont, CA 94611,  
 US [US, US];  
 HEVEZI, Peter, A., 1360 11th Avenue, San Francisco, CA  
 94122, US [GB, US];  
 MACK, David, H., 2076 Monterey Avenue, Menlo Park, CA  
 94025, US [US, US];  
 WILSON, Keith, E., 219 Jeter Street, Redwood City, CA  
 94062, US [US, US];  
 ZLOTNIK, Albert, 507 Alger Drive, Palo Alto, CA 94306,  
 US [US, US]  
 PATENT ASSIGNEE(S): EOS BIOTECHNOLOGY, INC., 225A Gateway, Boulevard, South  
 San Francisco, CA 94080, US [US, US], for all  
 designates States except US;  
 AFAR, Daniel, 435 Visitacion Avenue, Brisbane, CA  
 94005, US [CA, US], for US only;  
 AZIZ, Natasha, 411 California Avenue, Palo Alto, CA  
 94306, US [US, US], for US only;  
 GISH, Kurt, C., 37 Artuna Avenue, Piedmont, CA 94611,

US [US, US], for US only;  
HEVEZI, Peter, A., 1360 11th Avenue, San Francisco, CA 94122, US [GB, US], for US only;  
MACK, David, H., 2076 Monterey Avenue, Menlo Park, CA 94025, US [US, US], for US only;  
WILSON, Keith, E., 219 Jeter Street, Redwood City, CA 94062, US [US, US], for US only;  
ZLOTNIK, Albert, 507 Alger Drive, Palo Alto, CA 94306, US [US, US], for US only  
BASTIAN, Kevin, L.\$, Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111\$, US

AGENT:

LANGUAGE OF FILING:  
LANGUAGE OF PUBL.:  
DOCUMENT TYPE:  
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2003025138	A2	20030327

DESIGNATED STATES

W:

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW  
AM AZ BY KG KZ MD RU TJ TM  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

RW (ARIPO):

RW (EAPO):

RW (EPO):

RW (OAPI):

APPLICATION INFO.:  
PRIORITY INFO.:

WO 2002-US29560	A	20020917
US 2001-60/323,469		20010917
US 2001-60/323,887		20010920
US 2001-60/350,666		20011113
US 2002-60/355,145		20020208
US 2002-60/355,257		20020208
US 2002-60/372,246		20020412

L4 ANSWER 4 OF 20  
ACCESSION NUMBER:

PCTFULL COPYRIGHT 2003 Univentio on STN  
2002034205 PCTFULL ED 20020515 EW 200218  
USING HEAT SHOCK PROTEINS TO INCREASE IMMUNE RESPONSE  
UTILISATION DES PROTEINES DU STRESS POUR STIMULER LA  
REONSE IMMUNITAIRE

TITLE (ENGLISH):  
TITLE (FRENCH):

INVENTOR(S):  
SRIVASTAVA, Pramod, K., 70 Pheasant Run, Avon, CT 06001, US  
PATENT ASSIGNEE(S):  
UNIVERSITY OF CONNECTICUT HEALTH CENTER, 263 Farmington Avenue, Farmington, CT 06030, US [US, US]

AGENT:  
ANTLER, Adriane, M.\$, Pennie & Edmonds LLP, 1155 Avenue of the Americas, New York, NY 10036\$, US

LANGUAGE OF FILING:  
LANGUAGE OF PUBL.:  
DOCUMENT TYPE:  
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2002034205	A2	20020502

DESIGNATED STATES

W:

RW (EPO):

APPLICATION INFO.:  
PRIORITY INFO.:

AU CA JP  
AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
TR  
WO 2001-US46332 A 20011019  
US 2000-09/693,643 20001020

L4 ANSWER 5 OF 20  
ACCESSION NUMBER: PCTFULL COPYRIGHT 2003 Univentio on STN  
TITLE (ENGLISH): 2002016414 PCTFULL ED 20020711 EW 200209  
TITLE (FRENCH): COMPOSITION FOR THE ELIMINATION OF AUTOREACTIVE B-CELLS  
INVENTOR(S): COMPOSITION DESTINEE A L'ELIMINATION DES CELLULES B  
AUTOREACTIVES  
ZOCHER, Marcel, Theodor-Koerner-Str. 13, 82049  
Muenchen-Pullach, DE [DE, DE];  
BAeUERLE, Patrick, Vogelsangstr. 13A, 82152 Gauting, DE  
[DE, DE];  
DREIER, Torsten, Johann-Clanze-Str. 39, 81369 Muenchen,  
DE [DE, DE]  
PATENT ASSIGNEE(S): MICROMET AG, Am Klopferspitz 19, 82152  
Martinsried/Muenchen, DE [DE, DE], for all designates  
States except US;  
ZOCHER, Marcel, Theodor-Koerner-Str. 13, 82049  
Muenchen-Pullach, DE [DE, DE], for US only;  
BAeUERLE, Patrick, Vogelsangstr. 13A, 82152 Gauting, DE  
[DE, DE], for US only;  
DREIER, Torsten, Johann-Clanze-Str. 39, 81369 Muenchen,  
DE [DE, DE], for US only  
AGENT: VOSSIUS & PARTNER\$, Sieberstr. 4, 81675 Muenchen\$, DE  
LANGUAGE OF FILING: English  
LANGUAGE OF PUBL.: English  
DOCUMENT TYPE: Patent  
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2002016414	A2	20020228

DESIGNATED STATES  
W:  
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR  
CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID  
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD  
MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK  
SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
AM AZ BY KG KZ MD RU TJ TM  
AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
TR  
BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
APPLICATION INFO.: WO 2001-EP9714 A 20010822  
PRIORITY INFO.: EP 2000-00117354.1 20000822

L4 ANSWER 6 OF 20  
ACCESSION NUMBER: PCTFULL COPYRIGHT 2003 Univentio on STN  
TITLE (ENGLISH): 2001064835 PCTFULL ED 20020822  
TITLE (FRENCH): NOVEL NUCLEIC ACIDS AND POLYPEPTIDES  
INVENTOR(S): NOUVEAUX ACIDES NUCLEIQUES ET POLYPEPTIDES  
TANG, Y., Tom;  
LIU, Chenghua;  
DRMANAC, Radoje, T.

PATENT ASSIGNEE(S):  
HYSEQ, INC.;  
TANG, Y., Tom;  
LIU, Chenghua;  
DRMANAC, Radoje, T.  
PATENT INFORMATION: Patent

NUMBER	KIND	DATE
WO 2001064835	A2	20010907

DESIGNATED STATES  
W:  
AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU  
CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK  
MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM

TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW MZ SD  
 SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY  
 DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF  
 CG CI CM GA GN GW ML MR NE SN TD TG  
 WO 2001-US4927 A 20010226  
 US 2000-09/515,126 20000228  
 US 2000-09/577,409 20000518

APPLICATION INFO.:  
 PRIORITY INFO.:

L4 ANSWER 7 OF 20  
 ACCESSION NUMBER:

TITLE (ENGLISH):  
 TITLE (FRENCH):

INVENTOR(S):

PATENT ASSIGNEE(S):

LANGUAGE OF PUBL.:

DOCUMENT TYPE:

PATENT INFORMATION:

PCTFULL COPYRIGHT 2003 Univentio on STN

1999047169 PCTFULL ED 20020515

METHODS TO PROVOKE ANTI-CANCER IMMUNE RESPONSES  
 METHODES POUR PROVOQUER DES REPONSES IMMUNITAIRES  
 ANTICANCERÉUSES

ROBERTS, Bruce, L.

GENZYME CORPORATION;

ROBERTS, Bruce, L.

English

Patent

NUMBER KIND DATE

WO 9947169 A1 19990923

DESIGNATED STATES

W:

AU CA JP US AT BE CH CY DE DK ES FI FR GB GR IE IT LU  
 MC NL PT SE

APPLICATION INFO.:

PRIORITY INFO.:

WO 1999-US6048 A 19990319

US 1998-60/078,931 19980320

L4 ANSWER 8 OF 20

ACCESSION NUMBER:

TITLE (ENGLISH):

TITLE (FRENCH):

INVENTOR(S):

PATENT ASSIGNEE(S):

LANGUAGE OF PUBL.:

DOCUMENT TYPE:

PATENT INFORMATION:

PCTFULL COPYRIGHT 2003 Univentio on STN

1999027958 PCTFULL ED 20020515

HIV-1 TAT, OR DERIVATIVES THEREOF FOR PROPHYLACTIC AND  
 THERAPEUTIC VACCINATION

TAT DE VIH-1 OU SES DERIVES COMME PRODUIT  
 PROPHYLACTIQUE OU THERAPEUTIQUE DE VACCINATION

ENSOli, Barbara

ISTITUTO SUPERIORE DI SANITA';

ENSOli, Barbara

English

Patent

NUMBER KIND DATE

WO 9927958 A2 19990610

DESIGNATED STATES

W:

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE  
 ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ  
 LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO  
 RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW  
 GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM  
 AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
 BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

APPLICATION INFO.:

PRIORITY INFO.:

WO 1998-EP7721 A 19981130

IT 1997-RM97A000743 19971201

L4 ANSWER 9 OF 20 USPATFULL on STN

ACCESSION NUMBER: 2003:72182 USPATFULL

TITLE: Induction of a Th1-like response in vitro

INVENTOR(S): Siegel, Marvin, Blue Bell, PA, UNITED STATES

Chu, N. Randall, Victoria, CANADA

Mizzen, Lee A., Victoria, CANADA

PATENT ASSIGNEE(S): Stressgen Biotechnologies Corporation, a Victoria,  
 Canada corporation (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003050469	A1	20030313
APPLICATION INFO.:	US 2002-267311	A1	20021009 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2000-613303, filed on 10 Jul 2000, GRANTED, Pat. No. US 6495347		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-143757P	19990708 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	FISH & RICHARDSON PC, 225 FRANKLIN ST, BOSTON, MA, 02110	
NUMBER OF CLAIMS:	64	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	37 Drawing Page(s)	
LINE COUNT:	4386	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

L4 ANSWER 10 OF 20 USPATFULL on STN  
 ACCESSION NUMBER: 2003:40533 USPATFULL  
 TITLE: Methods for the inhibition of epstein-barr virus transmission employing anti-viral peptides capable of abrogating viral fusion and transmission  
 INVENTOR(S): Barney, Shawn O'Lin, Cary, NC, United States  
 Lambert, Dennis Michael, Cary, NC, United States  
 Petteway, Stephen Robert, Cary, NC, United States  
 Trimeris, Inc., Durham, NC, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6518013	B1	20030211
APPLICATION INFO.:	US 1995-485546		19950607 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Scheiner, Laurie		
ASSISTANT EXAMINER:	Parkin, Jeffrey S.		
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP, Nelson, M. Bud		
NUMBER OF CLAIMS:	22		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	84 Drawing Figure(s); 83 Drawing Page(s)		
LINE COUNT:	24700		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			

L4 ANSWER 11 OF 20 USPATFULL on STN  
 ACCESSION NUMBER: 2003:30345 USPATFULL  
 TITLE: Ligation of CEACAM1  
 INVENTOR(S): Gray-Owen, Scott D., Oakville, CANADA  
 Boulton, Ian C., Toronto, CANADA

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003022292	A1	20030130
APPLICATION INFO.:	US 2002-163638	A1	20020607 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-296152P	20010607 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BERESKIN AND PARR, SCOTIA PLAZA, 40 KING STREET WEST-SUITE 4000 BOX 401, TORONTO, ON, M5H 3Y2	
NUMBER OF CLAIMS:	22	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	23 Drawing Page(s)	
LINE COUNT:	2327	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

L4 ANSWER 12 OF 20	USPATFULL on STN
ACCESSION NUMBER:	2002:332610 USPATFULL
TITLE:	Induction of a Th1-like response in vitro
INVENTOR(S):	Siegel, Marvin, Blue Bell, PA, United States Chu, N. Randall, Victoria, CANADA Mizzen, Lee A., Victoria, CANADA
PATENT ASSIGNEE(S):	Stressgen Biotechnologies Corporation, Victoria, CANADA (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6495347	B1	20021217
APPLICATION INFO.:	US 2000-613303		20000710 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-143757P	19990708 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Park, Hankyel T.	
LEGAL REPRESENTATIVE:	Fish & Richardson P.C.	
NUMBER OF CLAIMS:	64	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	39 Drawing Figure(s); 37 Drawing Page(s)	
LINE COUNT:	4697	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

L4 ANSWER 13 OF 20	USPATFULL on STN
ACCESSION NUMBER:	2002:307563 USPATFULL
TITLE:	Using heat shock proteins to increase immune response
INVENTOR(S):	Srivastava, Pramod K., Avon, CT, UNITED STATES
PATENT ASSIGNEE(S):	University of Connecticut Health Center (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002172682	A1	20021121
APPLICATION INFO.:	US 2002-131937	A1	20020425 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2000-693643, filed on 20 Oct 2000, PENDING		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711		
NUMBER OF CLAIMS:	88		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	12 Drawing Page(s)		
LINE COUNT:	3533		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			

L4 ANSWER 14 OF 20 USPATFULL on STN  
ACCESSION NUMBER: 2002:297296 USPATFULL  
TITLE: Methods for inhibition of membrane fusion-associated events, including respiratory syncytial virus transmission  
INVENTOR(S): Bolognesi, Dani Paul, Durham, NC, United States  
Matthews, Thomas James, Durham, NC, United States  
Wild, Carl T., Durham, NC, United States  
Barney, Shawn O'Lin, Cary, NC, United States  
Lambert, Dennis Michael, Cary, NC, United States  
Petteway, Stephen Robert, Cary, NC, United States  
Langlois, Alphonse J., Durham, NC, United States  
Trimeris, Inc., Durham, NC, United States (U.S. corporation)  
PATENT ASSIGNEE(S):

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6479055	B1	20021112
APPLICATION INFO.:	US 1995-470896		19950606 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994, now patented, Pat. No. US 6017536		
	Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Stucker, Jeffrey		
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP		
NUMBER OF CLAIMS:	44		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	84 Drawing Figure(s); 83 Drawing Page(s)		
LINE COUNT:	26553		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			

L4 ANSWER 15 OF 20 USPATFULL on STN  
ACCESSION NUMBER: 2002:112558 USPATFULL  
TITLE: Fungal antigens and process for producing the same  
INVENTOR(S): Takesako, Kazutoh, Otsu-shi, JAPAN  
Mizutani, Shigetoshi, Gamo-gun, JAPAN  
Endo, Masahiro, Kusatsu-shi, JAPAN  
Kato, Ikuoshin, Uji-shi, JAPAN  
PATENT ASSIGNEE(S): TAKARA SHUZO CO., LTD, Kyoto, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002058293	A1	20020516
APPLICATION INFO.:	US 2001-987190	A1	20011113 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1999-262856, filed on 4 Mar 1999, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	WO 1997-JP3041	19970829
	JP 1996-255400	19960904
	JP 1997-99775	19970331
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS CHURCH, VA, 22040-0747	
NUMBER OF CLAIMS:	20	
EXEMPLARY CLAIM:	1	

NUMBER OF DRAWINGS: 9 Drawing Page(s)  
LINE COUNT: 3093  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 16 OF 20 USPATFULL on STN  
ACCESSION NUMBER: 2002:12021 USPATFULL  
TITLE: In VIVO loading of MHC  
INVENTOR(S): Roberts, Bruce L., Southboro, MA, UNITED STATES  
Shankara, Srinivas, Shrewsbury, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002006397	A1	20020117
APPLICATION INFO.:	US 2001-843342	A1	20010425 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-200562P	20000428 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	GENZYME CORPORATION, LEGAL DEPARTMENT, 15 PLEASANT ST CONNECTOR, FRAMINGHAM, MA, 01701-9322	
NUMBER OF CLAIMS:	18	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2349	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 17 OF 20 USPATFULL on STN  
ACCESSION NUMBER: 2001:235097 USPATFULL  
TITLE: Fungal antigens and process for producing the same  
INVENTOR(S): Takesako, Kazutoh, Otsu, Japan  
Mizutani, Shigetoshi, Gamo-gun, Japan  
Endo, Masahiro, Kusatsu, Japan  
Kato, Ikuoshin, Uji, Japan  
PATENT ASSIGNEE(S): Takara Shuzo Co., Ltd., Kyoto, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6333164	B1	20011225
APPLICATION INFO.:	US 1999-262856		19990304 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 1997-JP3041, filed on 29 Aug 1997		

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1996-255400	19960904
	JP 1997-99775	19970331
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Smith, Lynette R. F.	
ASSISTANT EXAMINER:	Baskar, Padma	
LEGAL REPRESENTATIVE:	Birch, Stewart, Kolasch & Birch, LLP	
NUMBER OF CLAIMS:	12	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	9 Drawing Figure(s); 9 Drawing Page(s)	
LINE COUNT:	2782	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 18 OF 20 USPATFULL on STN  
ACCESSION NUMBER: 2001:67794 USPATFULL  
TITLE: Human respiratory syncytial virus peptides with antifusogenic and antiviral activities

INVENTOR(S): Barney, Shawn O'Lin, Cary, NC, United States  
Lambert, Dennis Michael, Cary, NC, United States  
Petteway, Stephen Robert, Cary, NC, United States  
Trimeris, Inc., Durham, NC, United States (U.S. corporation)

PATENT ASSIGNEE(S):

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6228983	B1	20010508
APPLICATION INFO.:	US 1995-485264		19950607 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1995-470896, filed on 6 Jun 1995 Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Scheiner, Laurie		
ASSISTANT EXAMINER:	Parkin, Jeffrey S.		
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP		
NUMBER OF CLAIMS:	62		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	84 Drawing Figure(s); 83 Drawing Page(s)		
LINE COUNT:	32166		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			

L4 ANSWER 19 OF 20 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER: 1074617 EUROPATFULL EW 200106 FS OS  
TITLE: Primers for synthesising full-length cDNA and their use.  
Primers fuer Synthese von ganzen-Laenge cDNS und deren Anwendung.  
Primers for synthesising full-length cDNA and their use.  
INVENTOR(S): Ota, Toshio, 1-2-7-105, Tsujido Shinmachi, Fujisawa-shi, Kanagawa 251-0042, JP;  
Isogai, Takao, 511-12, Ohmuro, Ami-machi, Inashiki-gun, Ibaraki 300-0303, JP;  
Nishikawa, Tetsuo, 27-3-403, Hikawa-cho, Itabashi-ku, Tokyo 173-0013, JP;  
Hayashi, Kohji, 1-9-446, Yushudai Nishi, Ichihara-shi, Chiba 292-0056, JP;  
Saito, Kaoru, 2-8-1-201, Kisarazu, Kisarazu-shi, Chiba 292-0056, JP;  
Yamamoto, Junichi, 3-28-3-A101, Kiyomidai Higashi, Kisarazu-shi, Chiba 292-0041, JP;  
Ishii, Shizuko, 4508-19-202, Yana, Kisarazu-shi, Chiba 292-0812, JP;  
Sugiyama, Tomoyasu, 2-6-23-102, Kiyomidai, Kisarazu-shi, Chiba 292-0045, JP;  
Wakamatsu, Ai, 1473-4-202, Takayanagi, Kisarazu-shi, Chiba 292-0014, JP;  
Nagai, Keiichi, 3-44-14-9-204, Sakuragaoka, Higashiyamato-shi, Tokyo 207-0022, JP;  
Otsuki, Tetsuji, 3-1-10-B102, Asahi, Kisarazu-shi, Chiba 292-0045, JP  
PATENT ASSIGNEE(S): Helix Research Institute, 1532-3 Yana, Kisarazu-shi, Chiba 292-0812, JP  
PATENT ASSIGNEE NO: 2656450  
AGENT: VOSSIUS & PARTNER, Siebertstrasse 4, 81675 Muenchen, DE  
AGENT NUMBER: 100314

OTHER SOURCE: BEPA2001012 EP 1074617 A2 0253  
 SOURCE: Wila-EPZ-2001-H06-T1a  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Anmeldung in Englisch; Veroeffentlichung in Englisch  
 DESIGNATED STATES: R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE; R AL; R LT; R LV; R MK; R RO; R SI  
 PATENT INFO. PUB. TYPE: EPA2 EUROPÆISCHE PATENTANMELDUNG  
 PATENT INFORMATION:

PATENT NO	KIND DATE
EP 1074617	A2 20010207

'OFFENLEGUNGS' DATE: 20010207  
 APPLICATION INFO.: EP 2000-116126 20000728  
 PRIORITY APPLN. INFO.: JP 1999-248036 19990729  
 JP 1999-300253 19990827  
 JP 2000-2000118776 20000111  
 JP 2000-2000183767 20000502  
 JP 2000-2000241899 20000609

L4 ANSWER 20 OF 20 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER: 970966 EUROPATFULL EW 200002 FS OS  
 TITLE: FUNGAL ANTIGENS AND PROCESS FOR PRODUCING THE SAME.  
 PILZLICHE ANTIGENE UND VERFAHREN ZU DEREN HERSTELLUNG.  
 ANTIGENES FONGIQUES ET PROCESSUS DE FABRICATION.  
 INVENTOR(S): TAKESAKO, Kazutoh, 4-20-208, Akibadai, Otsu-shi, Shiga 520, JP;  
 MIZUTANI, Shigetoshi, 1-86, Miyazu, Azuchi-cho, Gamo-gun, Shiga 521-13, JP;  
 ENDO, Masahiro, Hamoparesu-Kusatsu 405, 12-1, Nishishibukawa 2-chome, Kusatsu-shi, Shiga 525, JP;  
 KATO, Ikunoshin, 1-1-150, Nanryo-cho, Uji-shi, Kyoto 611, JP  
 PATENT ASSIGNEE(S): TAKARA SHUZO CO. LTD., 609 Takenaka-cho Fushimi-ku, Kyoto-shi, Kyoto 612, JP  
 PATENT ASSIGNEE NO: 710324  
 AGENT: VOSSIUS & PARTNER, Siebertstrasse 4, 81675 Muenchen, DE  
 AGENT NUMBER: 100314  
 OTHER SOURCE: BEPA2000003 EP 0970966 A1 0048  
 SOURCE: Wila-EPZ-2000-H02-T1a  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Anmeldung in Japanisch; Veroeffentlichung in Englisch; Verfahren in Englisch  
 DESIGNATED STATES: R DE; R FR; R GB; R IT; R NL  
 PATENT INFO. PUB. TYPE: EPA1 EUROPÆISCHE PATENTANMELDUNG (Internationale Anmeldung)  
 PATENT INFORMATION:

PATENT NO	KIND DATE
EP 970966	A1 20000112

'OFFENLEGUNGS' DATE: 20000112  
 APPLICATION INFO.: EP 1997-937856 19970829  
 PRIORITY APPLN. INFO.: JP 1996-255400 19960904  
 JP 1997-99775 19970331  
 RELATED DOC. INFO.: WO 97-JP3041 970829 INTAKZ  
 WO 9809990 980312 INTPNR

=> d ibib kwic 18 20

L4 ANSWER 18 OF 20 USPATFULL on STN  
 ACCESSION NUMBER: 2001:67794 USPATFULL  
 TITLE: Human respiratory syncytial virus peptides with  
 antifusogenic and antiviral activities  
 INVENTOR(S): Barney, Shawn O'Lin, Cary, NC, United States  
 Lambert, Dennis Michael, Cary, NC, United States  
 Petteway, Stephen Robert, Cary, NC, United States  
 PATENT ASSIGNEE(S): Trimeris, Inc., Durham, NC, United States (U.S.  
 corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6228983	B1	20010508
APPLICATION INFO.:	US 1995-485264		19950607 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1995-470896, filed on 6 Jun 1995 Continuation-in-part of Ser. No. US 1994-360107, filed on 20 Dec 1994 Continuation-in-part of Ser. No. US 1994-255208, filed on 7 Jun 1994 Continuation-in-part of Ser. No. US 1993-73028, filed on 7 Jun 1993, now patented, Pat. No. US 5464933		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Scheiner, Laurie		
ASSISTANT EXAMINER:	Parkin, Jeffrey S.		
LEGAL REPRESENTATIVE:	Pennie & Edmonds LLP		
NUMBER OF CLAIMS:	62		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	84 Drawing Figure(s); 83 Drawing Page(s)		
LINE COUNT:	32166		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			

L4 ANSWER 20 OF 20 EUROPATFULL COPYRIGHT 2003 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

ACCESSION NUMBER:	970966	EUROPATFULL EW 200002 FS OS
TITLE:	FUNGAL ANTIGENS AND PROCESS FOR PRODUCING THE SAME. PILZLICHE ANTIGENE UND VERFAHREN ZU DEREN HERSTELLUNG. ANTIGENES FONGIQUES ET PROCESSUS DE FABRICATION.	
INVENTOR(S):	TAKESAKO, Kazutoh, 4-20-208, Akibadai, Otsu-shi, Shiga 520, JP; MIZUTANI, Shigetoshi, 1-86, Miyazu, Azuchi-cho, Gamo-gun, Shiga 521-13, JP; ENDO, Masahiro, Hamoparesu-Kusatsu 405, 12-1, Nishishibukawa 2-chome, Kusatsu-shi, Shiga 525, JP; KATO, Ikunoshin, 1-1-150, Nanryo-cho, Uji-shi, Kyoto 611, JP	
PATENT ASSIGNEE(S):	TAKARA SHUZO CO. LTD., 609 Takenaka-cho Fushimi-ku, Kyoto-shi, Kyoto 612, JP	
PATENT ASSIGNEE NO:	710324	
AGENT:	VOSSIUS & PARTNER, Siebertstrasse 4, 81675 Muenchen, DE	
AGENT NUMBER:	100314	
OTHER SOURCE:	BEP A2000003 EP 0970966 A1 0048	
SOURCE:	Wila-EPZ-2000-H02-T1a	
DOCUMENT TYPE:	Patent	
LANGUAGE:	Anmeldung in Japanisch; Veröffentlichung in Englisch; Verfahren in Englisch	
DESIGNATED STATES:	R DE; R FR; R GB; R IT; R NL	
PATENT INFO. PUB. TYPE:	EP A1 EUROPÄISCHE PATENTANMELDUNG (Internationale Anmeldung)	
PATENT INFORMATION:	PATENT NO	KIND DATE

EP 970966	A1 20000112
'OFFENLEGUNGS' DATE:	20000112
APPLICATION INFO.:	EP 1997-937856 19970829
PRIORITY APPLN. INFO.:	JP 1996-255400 19960904
	JP 1997-99775 19970331
RELATED DOC. INFO.:	WO 97-JP3041 970829 INTAKZ
	WO 9809990 980312 INTPNR

DETDEN. . . activity for releasing cytokines, such as IFN-.gamma. from the cells. The cytokine-releasing cells include, for example, T lymphocytes, natural killer (**NK**) **cells**, and the like. On the other hand, the present inventors have clarified that the insoluble fraction obtainable from protoplasts derived. . . . The results are shown in Table 1. The insoluble fraction Ca-LSP exhibited more potent vaccine activity than the ribosome fraction (HSP) and the **soluble** fraction (HSS). <image>

2) Comparison of vaccine activity of *Candida albicans* insoluble fraction Ca-LSP with living cell vaccine: The. . . .

=> d history

(FILE 'HOME' ENTERED AT 16:53:38 ON 14 SEP 2003)

FILE 'MEDLINE, BIOSIS, SCISEARCH, CANCERLIT, LIFESCI, BIOTECHDS, CAPLUS' ENTERED AT 16:54:13 ON 14 SEP 2003

FILE 'PCTFULL, USPATFULL, EUROPATFULL' ENTERED AT 17:24:17 ON 14 SEP 2003

L1	11572 S (NK OR (NATURAL(W) KILLER) ) (W) CELL#
L2	14866 S HEAT(W) SHOCK(W) PROTEIN# OR HSP###
L3	126 S SOLUBLE(5A) L2
L4	20 S L1 AND L3

=> s soluble(4a)12  
L5 110 SOLUBLE(4A) L2

=> s soluble(4W)12  
L6 80 SOLUBLE(4W) L2

=> s 16/t,ab  
'T' IS NOT A VALID FIELD CODE  
'T' IS NOT A VALID FIELD CODE  
'T' IS NOT A VALID FIELD CODE  
L7 0 L6/T,AB

=> s 16/ti,ab  
L8 0 L6/TI,AB

=> s 12/ti,ab  
L9 576 L2/TI,AB

=> s 19 and 11  
L10 52 L9 AND L1

=> s 110 and pd<19990329  
L11 4 L10 AND PD<19990329

=> d ibib tot

L11 ANSWER 1 OF 4	PCTFULL COPYRIGHT 2003 Univentio on STN
ACCESSION NUMBER:	1998050424 PCTFULL ED 20020514
TITLE (ENGLISH):	HUMAN SERINE PROTEASE PRECURSOR
TITLE (FRENCH):	PRECURSEUR DE SERINE PROTEASE HUMAINE
INVENTOR(S):	HILLMAN, Jennifer, L.;

PATENT ASSIGNEE(S):

CORLEY, Neil, C.;  
SHAH, Purvi  
INCYTE PHARMACEUTICALS, INC.;  
HILLMAN, Jennifer, L.;  
CORLEY, Neil, C.;  
SHAH, Purvi

LANGUAGE OF PUBL.:  
DOCUMENT TYPE:  
PATENT INFORMATION

**PATIENT INFORMATION:**

**DESIGNATED STATES**

W.

AT AU BR CA CH CN DE DK ES FI GB IL JP KR MX NO NZ RU  
 SE SG US GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD  
 RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC  
 NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG  
 WO 1998-US9096 A 19980506  
 US 1997-08/851.974 19970507

APPLICATION INFO. :  
PRIORITY INFO. :

L11 ANSWER 2 OF 4  
ACCESSION NUMBER:  
TITLE (ENGLISH):

TITLE (FRENCH):

INVENTOR(S):

PATENT ASSIGNEE(S) :

LANGUAGE OF PUBL.:  
DOCUMENT TYPE:  
PATENT INFORMATION

## DESIGNATED STATES

W:

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE  
 ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC  
 LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU  
 SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH  
 GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT  
 BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ  
 CF CG CI CM GA GN ML MR NE SN TD TG  
 WO 1998-US1038 A 19980121  
 US 1997-60/035,662 19970121  
 US 1997-8/914,646 19970819

APPLICATION INFO. :  
PRIORITY INFO. :

L11 ANSWER 3 OF 4  
ACCESSION NUMBER:  
TITLE (ENGLISH):  
TITLE (FRENCH):

**INVENTOR(S):**

PATENT ASSIGNEE(S):  
LANGUAGE OF PUBL.:  
DOCUMENT TYPE:  
PATENT INFORMATION:

DESIGNATED STATES

W: AL AM AU AZ BA BB BG BR BY CA CN CU CZ EE GE GH HU ID  
 IL IS JP KG KP KR KZ LC LK LR LT LV MD MG MK MN MX NO  
 NZ PL RO RU SG SI SK SL TJ TM TR TT UA UZ VN YU GH KE  
 LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH  
 DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG  
 CI CM GA GN ML MR NE SN TD TG  
 APPLICATION INFO.: WO 1997-US18110 A 19971006  
 PRIORITY INFO.: US 1996-8/726,967 19961007

L11 ANSWER 4 OF 4 USPATFULL on STN  
 ACCESSION NUMBER: 1999:4419 USPATFULL  
 TITLE: Human serine protease precursor  
 INVENTOR(S): Hillman, Jennifer L., San Jose, CA, United States  
 Corley, Neil C., Mountain View, CA, United States  
 Shah, Purvi, Sunnyvale, CA, United States  
 PATENT ASSIGNEE(S): Incyte Pharmaceuticals, Inc., Palo Alto, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5858758		19990112	<--
APPLICATION INFO.:	US 1997-851974		19970507 (8)	
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Wax, Robert A.			
ASSISTANT EXAMINER:	Moore, William W.			
LEGAL REPRESENTATIVE:	Mohan-Peterson, Sheela, Billings, Lucy J. Incyte Pharmaceuticals, Inc.			
NUMBER OF CLAIMS:	8			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	8 Drawing Figure(s); 8 Drawing Page(s)			
LINE COUNT:	1963			
CAS INDEXING IS AVAILABLE FOR THIS PATENT.				

=> d ibib kwic 2 3 4

L11 ANSWER 2 OF 4 PCTFULL COPYRIGHT 2003 Univentio on STN  
 ACCESSION NUMBER: 1998031803 PCTFULL ED 20020514  
 TITLE (ENGLISH): THERAPIES INVOLVING MUTATED HEAT SHOCK TRANSCRIPTION FACTOR  
 TITLE (FRENCH): TRAITEMENTS COMPRENANT UN FACTEUR DE TRANSCRIPTION DE CHOC THERMIQUE MUTE  
 INVENTOR(S): VOELLMY, Richard, W.  
 PATENT ASSIGNEE(S): THE UNIVERSITY OF MIAMI;  
 VOELLMY, Richard, W.  
 LANGUAGE OF PUBL.: English  
 DOCUMENT TYPE: Patent  
 PATENT INFORMATION:

	NUMBER	KIND	DATE
DESIGNATED STATES	WO 9831803	A1	19980723
W:	AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG APPLICATION INFO.: WO 1998-US1038 A 19980121 PRIORITY INFO.: US 1997-60/035,662 19970121 US 1997-8/914,646 19970819		

PI **WO 9831803** A1 19980723  
ABEN The present invention relates to exogenous mutant HSF (mutHSF encoded by exogenous DNA) alters expression or synthesis of endogenous **heat shock protein (hsp)** genes in eukaryotic cells, tissues and organisms (e.g., mammalian, particularly human, cells, tissues and organisms). As described herein, mutHSF has been shown to regulate expression of endogenous **hsp** in cells and, as a result, to alter the response of the cells to stress. The mutHSF of the present. . .

ABFR . . . mutant exogene (mutHSF code par un ADN exogene) alterant l'expression ou la synthese de genes d'une proteine de choc thermique (**hsp**) endogene dans des cellules, des tissus et des organismes eucaryotes (par exemple des cellules, des tissus et des organismes de mammiferes et notamment, d'humains). Dans le procede selon l'invention, mutHSF regule l'expression d'une **hsp** endogene dans des cellules, et, ensuite, altere la reponse des cellules au stress. Le mutHSF de la presente invention est. . .

DETD . . . with anti-hsp70 antibody blockade, Multhoff et al. were able to correlate hsp70 surface expression on certain cell lines with increased sensitivity to IL2-stimulated CD3-**natural killer cells**. Note that in this as well as other studies claiming hsp70 surface expression all that was shown was anti-hsp70 antibody recognition of. . .

L11 ANSWER 3 OF 4 PCTFULL COPYRIGHT 2003 Univentio on STN  
ACCESSION NUMBER: 1998015616 PCTFULL ED 20020514  
TITLE (ENGLISH): METHODS FOR GENERATING CYTOTOXIC T CELLS IN VITRO  
TITLE (FRENCH): PROCEDES DE GENERATION IN VITRO DE LYMPHOCYTES T CYTOTOXIQUES  
INVENTOR(S): SRIVASTAVA, Pramod, K.;  
BINDER, Robert;  
BLACHERE, Nathalie, E.  
PATENT ASSIGNEE(S): FORDHAM UNIVERSITY  
LANGUAGE OF PUBL.: English  
DOCUMENT TYPE: Patent  
PATENT INFORMATION:

NUMBER	KIND	DATE
--------	------	------

WO 9815616 A1 19980416

DESIGNATED STATES  
W: AL AM AU AZ BA BB BG BR BY CA CN CU CZ EE GE GH HU ID IL IS JP KG KP KR KZ LC LK LR LT LV MD MG MK MN MX NO NZ PL RO RU SG SI SK SL TJ TM TR TT UA UZ VN YU GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

APPLICATION INFO.: WO 1997-US18110 A 19971006  
PRIORITY INFO.: US 1996-8/726,967 19961007

PI **WO 9815616** A1 19980416

ABEN . . . into antigen-reactive cytotoxic T cells. The effectiveness of the procedure may be enhanced by repeated restimulations and/or the addition of **heat shock protein-peptide complexes**. Methods and compositions are also disclosed for the treatment and prevention in a subject of

cancer or infectious disease. . .

DETD . . . system arise from pluripotent stem 20 cells through two main lines of differentiation: a) the lymphoid lineage producing lymphocytes (T cells, B cells, natural killer cells), and b) the myeloid lineage (monocytes, macrophages and neutrophils) and other accessory cells (dendritic cells, platelets and mast cells). In the 25 circulatory. . .

L11 ANSWER 4 OF 4 USPATFULL on STN

ACCESSION NUMBER: 1999:4419 USPATFULL

TITLE: Human serine protease precursor

INVENTOR(S): Hillman, Jennifer L., San Jose, CA, United States  
Corley, Neil C., Mountain View, CA, United States  
Shah, Purvi, Sunnyvale, CA, United States

PATENT ASSIGNEE(S): Incyte Pharmaceuticals, Inc., Palo Alto, CA, United States (U.S. corporation)

NUMBER	KIND	DATE
--------	------	------

PATENT INFORMATION:	US 5858758	19990112	<--
---------------------	------------	----------	-----

APPLICATION INFO.:	US 1997-851974	19970507	(8)
--------------------	----------------	----------	-----

DOCUMENT TYPE:	Utility
----------------	---------

FILE SEGMENT:	Granted
---------------	---------

PRIMARY EXAMINER:	Wax, Robert A.
-------------------	----------------

ASSISTANT EXAMINER:	Moore, William W.
---------------------	-------------------

LEGAL REPRESENTATIVE:	Mohan-Peterson, Sheela, Billings, Lucy J. Incyte Pharmaceuticals, Inc.
-----------------------	--

NUMBER OF CLAIMS:	8
-------------------	---

EXEMPLARY CLAIM:	1
------------------	---

NUMBER OF DRAWINGS:	8 Drawing Figure(s); 8 Drawing Page(s)
---------------------	--

LINE COUNT:	1963
-------------	------

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

PI	US 5858758	19990112	<--
----	------------	----------	-----

AB	The present invention provides a human serine protease precursor (HSPP) and polynucleotides which encode HSPP. The invention also provides expression vectors, host cells, agonists, antisense molecules, antibodies, or antagonists. The invention also provides methods for treating disorders associated with expression of HSPP.		
----	--	--	--

SUMM	A series of six SP have been identified in murine cytotoxic T-lymphocytes (CTL) and natural killer (NK) cells. These SP are involved with CTL and NK cells in the destruction of virally transformed cells and tumor cells and in organ and tissue transplant rejection (Zunino, S. J. . .).		
------	--	--	--

DRWD	FIGS. 2A and 2B show the amino acid sequence alignments between HSPP (SEQ ID NO:1), the rat natural killer cell protease-1 precursor, RNKP-1 (GI 206690; SEQ ID NO:3), and a human serine esterase from cytotoxic T lymphocytes, SECT (GI 306682; . . .).		
------	---	--	--

=> d history

(FILE 'HOME' ENTERED AT 16:53:38 ON 14 SEP 2003)

FILE 'MEDLINE, BIOSIS, SCISEARCH, CANCERLIT, LIFESCI, BIOTECHDS, CAPLUS' ENTERED AT 16:54:13 ON 14 SEP 2003

FILE 'PCTFULL, USPATFULL, EUROPATFULL' ENTERED AT 17:24:17 ON 14 SEP 2003

L1 11572 S (NK OR (NATURAL(W) KILLER)) (W) CELL#

L2 14866 S HEAT(W) SHOCK(W) PROTEIN# OR HSP##

L3 126 S SOLUBLE(5A) L2  
L4 20 S L1 AND L3  
L5 110 S SOLUBLE(4A) L2  
L6 80 S SOLUBLE(4W) L2  
L7 0 S L6/T, AB  
L8 0 S L6/TI, AB  
L9 576 S L2/TI, AB  
L10 52 S L9 AND L1  
L11 4 S L10 AND PD<19990329

=> s l1/ti,ab  
L12 293 L1/TI,AB

=> s l12 and l5  
L13 2 L12 AND L5

=> d ibib tot

L13 ANSWER 1 OF 2 PCTFULL COPYRIGHT 2003 Univentio on STN  
ACCESSION NUMBER: 2003068822 PCTFULL ED 20030903 EW 200334  
TITLE (ENGLISH): DE-IMMUNIZED (POLY) PEPTIDE CONSTRUCTS  
TITLE (FRENCH): CONSTRUCTIONS (POLY) PEPTIDIQUES DESIMMUNISEES  
INVENTOR(S): ZOCHER, Marcel, Friedrich-Heckerstr. 34, D-79539  
Loerrach, DE [DE, DE];  
DREIER, Torsten, Johann-Clanze-Strasse 39, D-81369  
Muenchen, DE [DE, DE];  
BAeUERLE, Patrick, Waldpromenade 18C, D-82131 Gauting,  
DE [DE, DE]  
PATENT ASSIGNEE(S): MICROMET AG, Staffelseestrasse 2, D-81477 Muenchen, DE  
[DE, DE], for all designates States except US;  
ZOCHER, Marcel, Friedrich-Heckerstr. 34, D-79539  
Loerrach, DE [DE, DE], for US only;  
DREIER, Torsten, Johann-Clanze-Strasse 39, D-81369  
Muenchen, DE [DE, DE], for US only;  
BAeUERLE, Patrick, Waldpromenade 18C, D-82131 Gauting,  
DE [DE, DE], for US only  
VOSSIUS & PARTNER\$, Siebertstrasse 4, D-81765 Muenchen\$,  
DE  
AGENT: English  
LANGUAGE OF FILING: English  
LANGUAGE OF PUBL.: English  
DOCUMENT TYPE: Patent  
PATENT INFORMATION:

NUMBER	KIND	DATE
WO 2003068822	A2	20030821

DESIGNATED STATES

W:

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR  
CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID  
IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD  
MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG  
SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW  
GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

RW (ARIPO):

AM AZ BY KG KZ MD RU TJ TM

RW (EPA):

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU

MC NL PT SE SI SK TR

RW (OAPI):

BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

APPLICATION INFO.: WO 2003-EP1389

A 20030212

PRIORITY INFO.: EP 2002-02003332.0

20020213

L13 ANSWER 2 OF 2

PCTFULL COPYRIGHT 2003 Univentio on STN

ACCESSION NUMBER: 2002016414 PCTFULL ED 20020711 EW 200209

TITLE (ENGLISH): COMPOSITION FOR THE ELIMINATION OF AUTOREACTIVE B-CELLS

TITLE (FRENCH): COMPOSITION DESTINEE A L'ELIMINATION DES CELLULES B

INVENTOR(S): AUTOREACTIVES  
 ZOCHER, Marcel, Theodor-Koerner-Str. 13, 82049  
 Muenchen-Pullach, DE [DE, DE];  
 BAeUERLE, Patrick, Vogelsangstr. 13A, 82152 Gauting, DE  
 [DE, DE];  
 DREIER, Torsten, Johann-Clanze-Str. 39, 81369 Muenchen,  
 DE [DE, DE]  
 PATENT ASSIGNEE(S): MICROMET AG, Am Klopferspitz 19, 82152  
 Martinsried/Muenchen, DE [DE, DE], for all designates  
 States except US;  
 ZOCHER, Marcel, Theodor-Koerner-Str. 13, 82049  
 Muenchen-Pullach, DE [DE, DE], for US only;  
 BAeUERLE, Patrick, Vogelsangstr. 13A, 82152 Gauting, DE  
 [DE, DE], for US only;  
 DREIER, Torsten, Johann-Clanze-Str. 39, 81369 Muenchen,  
 DE [DE, DE], for US only  
 VOSSIUS & PARTNER\$, Sieberstr. 4, 81675 Muenchen\$, DE  
 English  
 English  
 Patent  
 AGENT:  
 LANGUAGE OF FILING:  
 LANGUAGE OF PUBL.:  
 DOCUMENT TYPE:  
 PATENT INFORMATION:  
 DESIGNATED STATES  
 W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR  
 CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID  
 IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD  
 MG MK MN MW MZ NO NZ PH PL PT RO RU SD SE SG SI SK  
 SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
 GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
 AM AZ BY KG KZ MD RU TJ TM  
 RW (ARIPO): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
 TR  
 RW (EAPO): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
 RW (EPO): WO 2001-EP9714 A 20010822  
 APPLICATION INFO.: WO 2000-00117354.1 20000822  
 PRIORITY INFO.:  
 => d history

(FILE 'HOME' ENTERED AT 16:53:38 ON 14 SEP 2003)

FILE 'MEDLINE, BIOSIS, SCISEARCH, CANCERLIT, LIFESCI, BIOTECHDS, CAPLUS'  
 ENTERED AT 16:54:13 ON 14 SEP 2003

FILE 'PCTFULL, USPATFULL, EUROPATFULL' ENTERED AT 17:24:17 ON 14 SEP 2003  
 L1 11572 S (NK OR (NATURAL(W)KILLER)) (W)CELL#  
 L2 14866 S HEAT(W)SHOCK(W)PROTEIN# OR HSP##  
 L3 126 S SOLUBLE(5A)L2  
 L4 20 S L1 AND L3  
 L5 110 S SOLUBLE(4A)L2  
 L6 80 S SOLUBLE(4W)L2  
 L7 0 S L6/T,AB  
 L8 0 S L6/TI,AB  
 L9 576 S L2/TI,AB  
 L10 52 S L9 AND L1  
 L11 4 S L10 AND PD<19990329  
 L12 293 S L1/TI,AB  
 L13 2 S L12 AND L5

=> log h  
 COST IN U.S. DOLLARS SINCE FILE TOTAL

FULL ESTIMATED COST

ENTRY      SESSION  
62.16      104.84

SESSION WILL BE HELD FOR 60 MINUTES  
STN INTERNATIONAL SESSION SUSPENDED AT 17:41:25 ON 14 SEP 2003

L11 ANSWER 7 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
ACCESSION NUMBER: 1998:296438 BIOSIS  
DOCUMENT NUMBER: PREV199800296438  
TITLE: The role of heat shock proteins in the stimulation of an immune response.  
AUTHOR(S): Multhoff, Gabriele (1); Botzler, Claus; Issels, Rolf  
CORPORATE SOURCE: (1) GSF-Inst. Clin. Hematol., Marchioninistr. 25, D-81377  
Munich Germany  
SOURCE: Biological Chemistry, (March, 1998) Vol. 379, No.  
3, pp. 295-300.  
ISSN: 1431-6730.  
DOCUMENT TYPE: General Review  
LANGUAGE: English  
AB Heat shock proteins (HSP) have been defined as immunodominant, although most of them are highly conserved and ubiquitously distributed. Members of the 60, 70 and 90 kDa HSP families are involved in important aspects of viral and bacterial infections, in autoimmune diseases and in cancer immunity. HSP act as immunological target structures either by themselves because of an unusual expression pattern, or they are carrier proteins for immunogenic peptides. In addition to a classical major histocompatibility complex (MHC) restricted T cell response, a major contribution in the recognition of heat shock proteins has been shown for non-MHC restricted effector cells including gamma/delta TcR positive T lymphocytes and natural killer (NK) cells.

L6 ANSWER 22 OF 24 MEDLINE DUPLICATE 15  
ACCESSION NUMBER: 91318159 MEDLINE  
DOCUMENT NUMBER: 91318159 PubMed ID: 1861074  
TITLE: **Natural killer cell clones**  
can efficiently process and present protein antigens.  
AUTHOR: Roncarolo M G; Bigler M; Haanen J B; Yssel H; Bacchetta R;  
de Vries J E; Spits H  
CORPORATE SOURCE: DNAX Research Institute, Human Immunology Department, Palo  
Alto, CA 94304-1104.  
SOURCE: JOURNAL OF IMMUNOLOGY, (1991 Aug 1) 147 (3)  
781-7.  
Journal code: 2985117R. ISSN: 0022-1767.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals  
ENTRY MONTH: 199108  
ENTRY DATE: Entered STN: 19910922  
Last Updated on STN: 19910922  
Entered Medline: 19910830  
AB **NK cell clones** obtained from three different donors  
were tested for their ability to present soluble proteins to Ag-specific  
T  
cell clones. All NK clones were CD2+CD3-CD56+, whereas the expression of  
CD16 varied from clone to clone. The **NK cell clones**  
were able to process and present tetanus toxoid (TT) to TT-specific T  
cell  
clones in a class II HLA restricted manner. The capacity of **NK**  
**cell clones** to function as APC was also observed using the house  
dust mite allergen Der p I and the Der p I-derived peptide Val89-Cys117.  
As with EBV-transformed B cell line, **NK cell clones**  
could present the peptide 3-13 derived from the 65-kDa **heat**  
**shock protein** of *Mycobacterium leprae*, but they were  
unable to present the whole *M. leprae* Ag. Freshly isolated **NK**  
**cells, IL-2-activated NK cells**, and  
**NK cell** lines expanded in vitro could also process and  
present TT. The ability of the different NK populations to act as  
accessory cells correlated with their levels of class II HLA expression.  
These data demonstrate that **NK cell clones** can  
efficiently function as APC, however they may be restricted in the types  
of Ag that they can process.

L6 ANSWER 21 OF 24 MEDLINE DUPLICATE 14  
ACCESSION NUMBER: 93352110 MEDLINE  
DOCUMENT NUMBER: 93352110 PubMed ID: 8349312  
TITLE: Changes in the level of perforin and its transcript during effector and target cell interactions.  
AUTHOR: Kim K K; Blakely A; Zhou Z; Davis J; Clark W; Kwon B S  
CORPORATE SOURCE: Department of Microbiology and Immunology, Indiana University School of Medicine, Indianapolis 46202.  
CONTRACT NUMBER: DE10525 (NIDCR)  
K11DE00310 (NIDCR)  
MAI-28175 (NIAID)  
SOURCE: IMMUNOLOGY LETTERS, (1993 May) 36 (2) 161-9.  
Journal code: 7910006. ISSN: 0165-2478.  
PUB. COUNTRY: Netherlands  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199309  
ENTRY DATE: Entered STN: 19931001  
Last Updated on STN: 20000303  
Entered Medline: 19930915

AB Perforin is a cytoplasmic granule protein expressed in cytotoxic lymphocytes, and is capable of lysing target cells. This protein is induced as cytotoxic T cells are activated, and the mRNA expression is modulated by various stimulators. These observations suggest

possible changes in the level of perforin transcripts and protein when killer lymphocytes meet specific target cells leading to target cell death. To address this question, we examined three murine T-cell clones and primary human **NK cells** in perforin expression.

When the cytotoxic lymphocytes were exposed to sensitive targets, perforin

mRNA disappeared within 5 to 30 min and appeared within an hour thereafter. Among the murine T cell clones, L3 and OE4 showed two phases of mRNA decrease while human **NK cells** and the third murine T cell clone, AB.1, showed only one phase of mRNA loss during a

240 min period. The data indicate that when cytotoxic lymphocytes receive signals from a sensitive target, the cells rapidly degrade previously accumulated perforin mRNA and synthesize new transcripts. Interestingly, **heat shock protein** 70 mRNA was induced as the perforin mRNA levels recovered, while P55 IL-2 receptor mRNA was downregulated within 5 min after exposure to targets. The perforin protein

level also rapidly decreased immediately after the interaction with the target, followed by a recovery, and then another decrease as seen in primary human **NK cells**, OE4 and L3 cells. However, in the AB.1 clone, no change in perforin content was detectable, despite the loss of perforin mRNA. (ABSTRACT TRUNCATED AT 250 WORDS)

L6 ANSWER 18 OF 24 MEDLINE DUPLICATE 12  
ACCESSION NUMBER: 94044776 MEDLINE  
DOCUMENT NUMBER: 94044776 PubMed ID: 8228242  
TITLE: 70 kDa heat shock cognate protein is a transformation-associated antigen and a possible target for the host's anti-tumor immunity.  
AUTHOR: Tamura Y; Tsuboi N; Sato N; Kikuchi K  
CORPORATE SOURCE: Department of Pathology, Sapporo Medical University School of Medicine, Japan.  
SOURCE: JOURNAL OF IMMUNOLOGY, (1993 Nov 15) 151 (10) 5516-24.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals  
ENTRY MONTH: 199312  
ENTRY DATE: Entered STN: 19940117  
Last Updated on STN: 19990129  
Entered Medline: 19931210  
AB We previously investigated a novel heat-inducible transformation-associated cell surface Ag that is expressed on the **activated** H-ras oncogene-transformed rat fibrosarcoma W31, but not its parental nontransformed fibroblast WFB. This Ag was detected by mAb 067. Herein, we characterized the molecular nature of the Ag by using anti-**heat shock protein (HSP)** mAb. The accumulated data indicated that the cell surface expression of Ag was clearly enhanced by several stressors, such as TNF, L-azetidine-2-carboxylic acid, and sodium arsenite. The immunoprecipitate made with mAb 067 and W31 cell lysates reacted with anti-rat 70 kDa heat shock cognate (HSC) mAb, TG5E, indicating that 067-defined Ag may be a rat 70 kDa HSC. Because this Ag seemed to be one of the transformation-associated Ag of WFB, we further studied whether it could play an important role in the host's anti-tumor immunity. Peripheral T cells of rats primed with live BCG showed cytotoxicity to W31 but not to WFB. Because the possibility existed that HSP may interact with certain populations of T cells, we focused on the reactivity of CD4-CD8- double negative T (DNT) cells against 067-defined molecule. DNT cells from spleen and PBL of live BCG-primed rats showed the cytotoxicity against W31 cells. This cytotoxicity was completely blocked by mAb 067 and anti-CD3 mAb. However, it was not blocked by mAb R48B1 and 109, which detect the MHC class I nonpolymorphic determinant and a target molecule of the cytotoxicity by poly I:C-induced **NK cells**, respectively. Furthermore, brefeldin A was able to block the cytotoxicity against W31 targets by DNT cells, but not by **NK cells**. These data suggest that 70 kDa HSC may be a tumor Ag and may act as a presenting molecule perhaps complexed with cellular peptides to certain DNT cells.

L6 ANSWER 17 OF 24 CANCERLIT  
ACCESSION NUMBER: 95607573 CANCERLIT  
DOCUMENT NUMBER: 95607573  
TITLE: Induction of non-mhc restricted killer cells: differential induction of effector populations by tumour cell lines.  
AUTHOR: Selin L K  
CORPORATE SOURCE: Univ. of Manitoba, Canada.  
SOURCE: Diss Abstr Int [B], (1994) 55 (3) 814.  
ISSN: 0419-4217.  
DOCUMENT TYPE: (THESIS)  
LANGUAGE: English  
FILE SEGMENT: Institute for Cell and Developmental Biology  
ENTRY MONTH: 199506  
ENTRY DATE: Entered STN: 19950608  
Last Updated on STN: 19970509

AB The nonadaptive immune response characterized by non-MHC-restricted cytotoxic effectors appears to play a significant role in host cellular immunity against both infectious diseases and tumors. It is possible that cytotoxic responsiveness of these effectors to 'altered' tumor cells also implies a capacity to induce the effector population. A systematic examination of different tumor cell lines did demonstrate a differential ability of tumor cell lines to induce effectors both **NK cells** and gamma,delta T cells. The properties and characteristics which made tumor cell lines into effective inducers were examined as well as the nature of the effector populations. Lymphoblastoid B cell lines (LBL) were the most effective inducers of non-MHC restricted killer cell activity as they induced enhanced levels of cytotoxic activity and stimulated proliferative responses in the responder population. Different LBL alone or in conjunction with IL-2 were able to stimulate non-MHC restricted cytotoxic activity in **NK cells**, gamma,delta and alpha,beta T cells. The phenotype(s) which was induced was dependent on the specific LBL used in the induction system as well as the presence of IL-2. The presence of Epstein-Barr virus (EBV) infection was found to significantly enhance LBL cytotoxic and proliferation inductive capacity as well as the proportion of CD16+ cells. Studies using EBV+ and EBV- LBL suggested that at least two parameters were involved in the EBV+ LBL induction process, the presence of a stimulating antigen on the LBL which specifically stimulates CD16+ cells and a second element which results in the induction of IL-2. Neither parameter was sufficient alone. Consistent with the hypothesis that a LBL cell surface molecule was involved in the induction was the observations that cellular contact was found to be essential. As well antibodies to 3 classes of adhesion molecules (CD2, CD18, and CD29) were found to inhibit LBL induction of non-MHC restricted killer cell activity. Two LBL, RPMI 8226 and Daudi were found to be potent

inducers of Vgamma9 expressing T cells. This inductive capacity was not a general property of LBL nor did it relate to the presence of EBV nor to the tumor type of the B cell line. RPMI 8226 induced a population of gamma,delta T cells which were heterogeneous in terms of their cell surface markers, patterns of proliferation and cytotoxic responses. A member of the groEL **HSP** family (**HSP** 58) has been suggested as the inducing molecule in Daudi cells. Although anti-**HSP** 58 was inhibitory to gamma,delta T cell induction by RPMI 8226, Daudi and mycobacterial products evidence is presented which suggests this may not be a specific effect. Collectively, the results suggest that some LBL cell surface stimulus can induce an **activation** and expansion of non-MHC restricted killer cells. In

the present studies the expansion of CD16+ and gamma,delta TCR+ effectors were examined. This inductive ability of LBL appears to relate in part to viral infection and in part to the phenotypic properties of the inducer. The nature of the stimulus is still unclear at this time but these

results

do suggest that there is a clear distinction between target susceptibility

and inductive capacity. (Abstract shortened by UMI.) (Full text available from University Microfilms International, Ann Arbor, MI, as Order No. AADNN-85917)

L6 ANSWER 11 OF 24 MEDLINE DUPLICATE 7  
ACCESSION NUMBER: 96178427 MEDLINE  
DOCUMENT NUMBER: 96178427 PubMed ID: 8598315  
TITLE: Noncytotoxic alkyl-lysophospholipid treatment increases sensitivity of leukemic K562 cells to lysis by natural killer (NK) cells.  
COMMENT: Erratum in: Int J Cancer 1996 May 29;66(5):713  
AUTHOR: Botzler C; Kolb H J; Issels R D; Multhoff G  
CORPORATE SOURCE: GSF-Forschungszentrum fur Umwelt und Gesundheit GmbH, Institut fur Klinische Hamatologie, Munich, Germany.  
SOURCE: INTERNATIONAL JOURNAL OF CANCER, (1996 Mar 1) 65 (5) 633-8.  
Journal code: 0042124. ISSN: 0020-7136.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199604  
ENTRY DATE: Entered STN: 19960506  
Last Updated on STN: 19980206  
Entered Medline: 19960423

AB Alkyl-lysophospholipids (ALP) are a group of anti-cancer compounds that have previously been shown to have the unique feature of being selectively

toxic to neoplastic tissues. Because alkyl-lysophospholipids target the cell membrane as their site of action, our aim was to analyse the immunological effects of a nonlethal ALP treatment on leukemic K562 cells.

In this in vitro study we used ET-18-OCH<sub>3</sub>, one of the most potent ALP derivatives, at different concentrations ranging from 25 up to 100 microgram/ml. By measurement of cell viability and of apoptosis, we determined a concentration of 25 microgram/ml ET-18-OCH<sub>3</sub> and an incubation

period of 2 hr as nonlethal for K562 cells; higher concentrations markedly

reduced cell viability and led to induction of apoptosis. Similar to the effects induced by nonlethal heat shock, a nontoxic ET-18-OCH<sub>3</sub> treatment led to a significant increase in the sensitivity of K562 cells to lysis by

interleukin-2 (IL-2) stimulated natural killer (NK) cells. With respect to these results, we investigated the influence of nonlethal ALP treatment on the cell surface expression patterns and compared it to the results obtained with nonlethal heat shock. ALP treatment does not induce major histocompatibility complex (MHC) expression; however, a significant increase in the cell surface expression of HSP72 was shown by immunoblot analysis of membrane lysates of either untreated or ET-18-OCH<sub>3</sub> treated K562 cells. The increased sensitivity of ET-18-OCH<sub>3</sub> treated K562 cells to lysis by NK cells could be correlated with the elevated cell surface expression of HSP72.

L6 ANSWER 9 OF 24 MEDLINE DUPLICATE 5  
ACCESSION NUMBER: 1998052205 MEDLINE  
DOCUMENT NUMBER: 98052205 PubMed ID: 9392312  
TITLE: Immunosuppression by D-isomers of HLA class I heavy chain (amino acid 75 to 84)-derived peptides is independent of binding to HSC70.  
AUTHOR: Woo J; Iyer S; Cornejo M C; Gao L; Cuturi C; Soulillou J  
P; Buelow R  
CORPORATE SOURCE: SangStat Medical Corporation, Menlo Park, California 94025, USA.  
SOURCE: TRANSPLANTATION, (1997 Nov 27) 64 (10) 1460-7.  
Journal code: 0132144. ISSN: 0041-1337.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199712  
ENTRY DATE: Entered STN: 19980116  
Last Updated on STN: 19980116  
Entered Medline: 19971230

AB BACKGROUND: Peptides derived from the class I heavy chain were shown to modulate immune responses in vitro and in vivo. A peptide derived from HLA-B2702 (2702.75-84) inhibited differentiation of cytotoxic T cells as well as T cell and **natural killer cell** -mediated cytotoxicity in vitro. Peptide-mediated immunomodulation seemed to be independent of the MHC proteins expressed by responder and stimulator cells. In vivo studies in rodents demonstrated prolongation of heart and skin allograft survival after peptide therapy. Here, the correlation between the peptide's biological activity and its amino acid sequence was analyzed using peptides derived from amino acid 75-84 of several mouse, rat, and human MHC class I proteins as well as peptides with single amino acid substitutions in the 2702.75-84 sequence. METHODS: Peptides consisting of both L- and D-amino acids were tested for inhibition of murine and human T cell-mediated and lymphokine-**activated** killer cell-mediated cytotoxicity, binding to hsc70, and prolongation of heart allograft survival in vivo. RESULTS: Replacement of glutamic acid residue (E) at position 75 with valine (V) resulted in a peptide [2702.75-84(E>V)] with increased in vitro and in vivo activity

but unchanged affinity for hsc70. Surprisingly, both L- and D-isomers of 2702.75-84 and 2702.75-84(E>V) inhibited cytotoxic cells in vitro and prolonged heart allograft survival in vivo. However, as expected, the peptides consisting of D-amino acids did not bind to hsc70. CONCLUSION: Assuming that both D- and L-isomers modulate immune responses by similar mechanisms, these results suggest that the peptides' effect is independent of binding to hsc70.

L6 ANSWER 8 OF 24 MEDLINE DUPLICATE 4  
ACCESSION NUMBER: 1999096156 MEDLINE  
DOCUMENT NUMBER: 99096156 PubMed ID: 9881829  
TITLE: **Natural killer cell**  
reactivity: activation and cytolysis mechanism  
models, involving **heat shock**  
**protein**, haemopoietic histocompatibility, major  
histocompatibility complex and complement molecules.  
AUTHOR: Manzo G  
SOURCE: MEDICAL HYPOTHESES, (1998 Jul) 51 (1) 5-9. Ref:  
30  
Journal code: 7505668. ISSN: 0306-9877.  
PUB. COUNTRY: ENGLAND: United Kingdom  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals; Space Life Sciences  
ENTRY MONTH: 199903  
ENTRY DATE: Entered STN: 19990402  
Last Updated on STN: 19990402  
Entered Medline: 19990322  
AB The close association of **heat shock protein**  
(**HSP**), haemopoietic histocompatibility (Hh), major  
histocompatibility complex (MHC), and complement genes on the same  
chromosomal region, and the fact that all these genes are inherited on  
the  
whole in each haplotype of an individual, might indicate some  
evolutionary  
and functional correlations among them. Several data suggest for  
**HSP70** molecules a possible role as a molecular target recognizable  
by natural killer (NK) cells. **HSP70**  
sequences from both prokaryotic and eukaryotic organisms reveal that  
about  
half of the amino acid residues are identical and many of the remaining  
residues are similar. I here assume that NK reactivity might start, early  
in the immunogenesis process, as a effect of the interaction between  
**HSP70** molecules and a hypothetical **HSP** receptor of yet  
immature non-cytolytic **NK cells**. To this receptor, an  
**HSP** molecule might act as an **activator** or an inhibitor  
depending on whether its amino acid residues are reactive or not with it,  
respectively. Later in the immunogenesis process, murine Hh or human  
equivalent molecules, dominantly expressed in bone marrow target cells,  
might select the non-reactive NK clones of an individual, inducing them  
to  
mature and express a lytic machinery. As a consequence of the NK  
maturation, proliferating hemopoietic target cells expressing only or  
mainly **activator HSPs** on their surface might undergo  
NK cytolysis. This might explain the NK lysis of apparently normal cells  
found in human foetal marrow; moreover, this might explain in some way  
the  
F1 hybrid resistance phenomenon. The NK reactivity of an individual would  
be further modulated by the expression on the NK surface of particular  
receptors (CD94, p58) specific for defined MHC molecules (Cw1, Cw3, Bw6,  
B7) on the target cells. Such a specific interaction would induce an 'NK  
effector inhibition'. The NK reactivity mechanism might have been further  
evolutionarily modified and adapted by the involvement of other NK

receptors, such as CD11b (specific for the C3b factor of the complement) and CD16 (specific for the IgG Fc piece). Cooperation among **HSP**, MHC, CD11b, CD16, C3b and Fc allows us to propose original models of the **activation** and **cytolysis** mechanisms in the NK cytotoxicity and antibody-dependent cell cytotoxicity phenomena.

L6 ANSWER 4 OF 24 MEDLINE DUPLICATE 2  
ACCESSION NUMBER: 1999123776 MEDLINE  
DOCUMENT NUMBER: 99123776 PubMed ID: 9924701  
TITLE: **Heat shock protein** antibodies  
in sarcoma patients undergoing 41.8 degrees C whole body  
hyperthermia.  
AUTHOR: Katschinski D M; Benndorf R; Wiedemann G J; Mulkerin D L;  
Touhidi R; Robins H I  
CORPORATE SOURCE: University of Wisconsin, School of Medicine, Madison,  
USA.  
SOURCE: JOURNAL OF IMMUNOTHERAPY, (1999 Jan) 22 (1)  
67-70.  
Journal code: 9706083. ISSN: 1524-9557.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: (CLINICAL TRIAL)  
(CLINICAL TRIAL, PHASE II)  
Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199903  
ENTRY DATE: Entered STN: 19990402  
Last Updated on STN: 19990402  
Entered Medline: 19990325  
AB Previous in vitro studies of sarcoma and normal cell lines exposed to  
41.8 degrees C (x 60 min) demonstrated selective increased expression of  
members of the **heat shock protein** (HSP) family 70 on the cell surface of the sarcoma cells only. One  
implication of these data relates to the clinical application of  
targeting  
a stress-inducible, tumor-specific immune response. We therefore elected  
to measure immune response parameters (i.e., serum antibodies against  
HSP70i, 60, and 27) in six patients with sarcoma using a Western blot  
technique. These study patients received one to four successive 41.8  
degrees C whole-body hyperthermia (WBH) x 60-min treatments (given every  
3 weeks). We also tested the serum of 10 untreated healthy control subjects  
for the same parameters. In all patients, baseline HSP antibody  
levels were detectable; in no case did WBH result in an increase in  
HSP antibodies. The serum of one patient with sarcoma demonstrated  
a strong nonfluctuating reaction against HSP27 before and after  
WBH that had no obvious correlation; this was not observed in the sera of  
the control subjects. This study suggests that WBH does not induce a  
B-cell response to HSP family 70 antigens; these data, however,  
do not exclude the possibility of NK cell  
activation due to HSP antigen presentation.

L11 ANSWER 18 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
ACCESSION NUMBER: 1995:383492 BIOSIS  
DOCUMENT NUMBER: PREV199598397792  
TITLE: A heat inducible **heat shock**  
          **protein 72 (HSP72)** associated  
          immunogenic determinant acts as a tumor specific  
          recognition structure for **NK cells**.  
AUTHOR(S): Botzler, C.; Multhoff, G.; Wiesnet, M.; Wilmanns, W.;  
          Issels, R. D.  
CORPORATE SOURCE: GSF - Inst. Klin. Haematol., Munich Germany  
SOURCE: 9TH INTERNATIONAL CONGRESS OF IMMUNOLOGY.. (1995) pp. 488.  
          The 9th International Congress of Immunology.  
          Publisher: 9th International Congress of Immunology San  
          Francisco, California, USA.  
          Meeting Info.: Meeting Sponsored by the American  
          Association of Immunologists and the International Union  
of  
          Immunological Societies San Francisco, California, USA  
July  
          23-29, 1995  
DOCUMENT TYPE: Conference  
LANGUAGE: English

L11 ANSWER 17 OF 20 MEDLINE DUPLICATE 9  
ACCESSION NUMBER: 95359435 MEDLINE  
DOCUMENT NUMBER: 95359435 PubMed ID: 7632945  
TITLE: CD3- large granular lymphocytes recognize a heat-inducible immunogenic determinant associated with the 72-kD heat shock protein on human sarcoma cells.  
AUTHOR: Multhoff G; Botzler C; Wiesnet M; Eissner G; Issels R  
CORPORATE SOURCE: GSF-Institut fur Klinische Hamatologie, Munchen, Germany.  
SOURCE: BLOOD, (1995 Aug 15) 86 (4) 1374-82.  
Journal code: 7603509. ISSN: 0006-4971.  
PUB. COUNTRY: United States  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals  
ENTRY MONTH: 199509  
ENTRY DATE: Entered STN: 19950921  
Last Updated on STN: 19970203  
Entered Medline: 19950914

AB Traditionally, heat shock proteins (HSPs) are believed to be located intracellularly, where they perform a variety of chaperoning functions. Recently, evidence has accumulated that some tumor cells express HSPs on the cell surface. The present study confirms this finding and correlates **HSP72** cell surface expression, induced by nonlethal heat shock, with an increased sensitivity to interleukin-2-stimulated CD3-natural killer (NK) cells. After nonlethal heat shock, a monoclonal antibody directed against the major heat-inducible 72-kD HSP ( **HSP72** ) stains the cell surface of sarcoma cells (ie, Ewing's sarcoma cells or osteosarcoma cells) but not that of normal cells (ie, peripheral blood lymphocytes, fibroblasts, phytohemagglutin-stimulated blasts, B-lymphoblastoid cell lines) or of mammary carcinoma cell line MX-1 carcinoma cells. In this study, we show for the first time a correlation of **HSP72** cell surface expression with an increased susceptibility to lysis by NK effector cells. This finding is supported

by the following points: (1) HLA-disparate effector cells show similar, elevated lysis of **HSP72** heat-treated sarcoma cells; (2) CD(3-) **NK cells**, but not CD3+ cytotoxic T lymphocytes, are responsible for the recognition of heat-shocked sarcoma cells; (3) by antibody-blocking studies, an immunogenic **HSP72** determinant, which is expressed selectively on the cell surface of heat-treated

sarcoma cells could be correlated with NK recognition; (4) the reported phenomenon is independent of a heat-induced, transient downregulation of major histocompatibility complex (MHC) class-I expression; and (5) blocking of MHC class-I-restricted recognition, using either MHC class-I-specific monoclonal antibody W6/32 on the target cells or alpha/beta T-cell receptor monoclonal antibody WT31 on effector cells, also has no inhibitory effect on the lysis of **HSP72** tumor cells. Finally, our in vitro data might have further clinical implications with respect to

**HSP72** as a stress-inducible, sarcoma-specific NK recognition structure.

L11 ANSWER 15 OF 20 MEDLINE DUPLICATE 8  
ACCESSION NUMBER: 97157087 MEDLINE  
DOCUMENT NUMBER: 97157087 PubMed ID: 9003468  
TITLE: **Heat-shock protein 72**  
cell-surface expression on human lung carcinoma cells is  
associated with an increased sensitivity to lysis mediated  
by adherent **natural killer**  
**cells.**  
AUTHOR: Botzler C; Issels R; Multhoff G  
CORPORATE SOURCE: GSF-National Research Centre for Environment and Health,  
Institute of Clinical Hematology, Munich, Germany.  
SOURCE: CANCER IMMUNOLOGY, IMMUNOTHERAPY, (1996 Dec) 43  
(4) 226-30.  
Journal code: 8605732. ISSN: 0340-7004.  
PUB. COUNTRY: GERMANY: Germany, Federal Republic of  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199702  
ENTRY DATE: Entered STN: 19970305  
Last Updated on STN: 19970305  
Entered Medline: 19970219  
AB The cell-surface expression patterns of major histocompatibility complex  
(MHC) class I, class II and **heat-shock protein**  
**72 (HSP72)** molecules were measured on human lung (LX-1)  
and mammary (MX-1) carcinoma cells. No major differences were found in  
the  
MHC cell-surface expression pattern of both cell lines. However, they  
differ significantly in their capacity to express **HSP72** on their  
cell surface. Under physiological conditions LX-1 cells express  
**HSP72** molecules on more than 90% of the cells, whereas MX-1 cells  
exhibit no significant **HSP72** cell-surface expression (less than  
5%). These expression patterns remained stable in all further cell  
passages tested. The sensitivity to lysis mediated by an interleukin-2  
(IL-2)-stimulated, adherent natural killer (**NK**) cell  
population could be correlated with the amount of cell-surface-expressed  
**HSP72** molecules. By antibody-blocking studies, using **HSP72**  
-specific monoclonal antibody (mAb), a strong inhibition of lysis was  
only  
found with LX-1 cells but not with MX-1 cells. In contrast to the  
cell-surface expression, the cytoplasmic amount of **HSP72** in MX-1  
cells was twice as high compared to LX-1 cells under physiological  
conditions. After nonlethal heat-shock the rate of induction and the  
total  
cytoplasmic amounts of **HSP72** were comparable in both cell lines.  
The clonogenic cell viability of LX-1 cells after incubation at  
temperatures ranging from 41 degrees C to 44 degrees C was significantly  
elevated compared to that of MX-1 cells. In conclusion we state the  
following: (i) **HSP72** cell-surface expression on human carcinoma  
cells is independent of the cytoplasmic amount of **HSP72**; (ii)  
the cell-surface expression of **HSP72** is associated with an  
increased sensitivity of tumor cells to lysis mediated by an  
IL-2-stimulated, adherent **NK cell** population; (iii)  
thermoreistance is not related to the cytoplasmic **HSP72** level  
but might be related to the amount of **HSP72** expressed on the  
cell surface.

L11 ANSWER 14 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS  
INC.DUPLICATE

7

ACCESSION NUMBER: 1996:158870 BIOSIS  
DOCUMENT NUMBER: PREV199698731005  
TITLE: Noncytotoxic alkyl-lysophospholipid treatment increases sensitivity of leukemic K562 cells to lysis by natural killer (NK) cells.  
AUTHOR(S): Botzler, Claus; Kolb, Hans-Jochem; Issels, Rolf D.;  
Multhoff, Gabriele  
CORPORATE SOURCE: GSF-Inst. Klinische Haematologie, Marchioninistr. 25,  
D-81377 Munich Germany  
SOURCE: International Journal of Cancer, (1996) Vol. 65, No. 5,  
pp.  
633-638.  
ISSN: 0020-7136.

DOCUMENT TYPE: Article  
LANGUAGE: English

AB Alkyl-lysophospholipids (ALP) are a group of anti-cancer compounds that have previously been shown to have the unique feature of being selectively toxic to neoplastic tissues. Because alkyl-lysophospholipids target the cell membrane as their site of action, our aim was to analyse the immunological effects of a nonlethal ALP treatment on leukemic K562 cells.

In this in vitro study we used ET-18-OCH-3, one of the most potent ALP derivatives, at different concentrations ranging from 25 up to 100 mu-g/ml. By measurement of cell viability and of apoptosis, we determined a concentration of 25 mu-g/ml ET-18-OCH-3 and an incubation period of 2 hr

as nonlethal for K562 cells; higher concentrations markedly reduced cell viability and led to induction of apoptosis. Similar to the effects induced by nonlethal heat shock, a nontoxic ET-18-OCH-3 treatment led to

a significant increase in the sensitivity of K562 cells to lysis by interleukin-2 (IL-2) stimulated natural killer (NK) cells. With respect to these results, we investigated the influence of nonlethal ALP treatment on the cell surface expression patterns and compared it to the results obtained with nonlethal heat shock. ALP treatment does not induce major histocompatibility complex (MHC) expression; however, a significant increase in the cell surface expression of HSP72 was shown by immunoblot analysis of membrane lysates of either untreated or ET-18-OCH-3 treated K562 cells. The increased sensitivity of ET-18-OCH-3 treated K562 cells to lysis by NK cells could be correlated with the elevated cell surface expression of HSP72.

L11 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 1997:128116 CAPLUS  
DOCUMENT NUMBER: 126:169815  
TITLE: **Heat shock protein**  
72 (**HSP72**), a hyperthermia-inducible  
immunogenic determinant on leukemic K562 and Ewing's  
sarcoma cells  
AUTHOR(S): Multhoff, G.  
CORPORATE SOURCE: Inst. Klinische Haematologie, Munich, 81377, Germany  
SOURCE: International Journal of Hyperthermia (1997  
, 13(1), 39-48  
CODEN: IJHYEQ; ISSN: 0265-6736  
PUBLISHER: Taylor & Francis  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Following non-lethal heat stress (41.cntdot.7.degree.C) and a recover  
period at 37.degree.Cm the inducible 72 kDa HSP (**HSP72**) is  
detectable selectively on the cell surface of human Ewing's Sarcoma (ES)  
and of leukemic K562 cells but not on EBV transformed B cells (B-LCL)  
which we generated from PBL of healthy human volunteers. The  
**HSP72** expression was measured by flow-cytometric anal. using a  
monoclonal antibody (moAb) that specifically recognizes **HSP72**,  
the inducible form of the **HSP70** group. The major  
histocompatibility complex (MHC) class I expression, detected with the  
moAb W6/32 was not affected by non-lethal heat exposure and a recovery  
period at 37.degree.C for 12 h: ES cells express MHC class I mols. on  
about 80% of the cells; K562 cells exhibited no MHC class I expression  
neither before nor after heat shock. Inhibition of RNA-(actinomycin D)  
or  
protein-synthesis (cycloheximide) prior to heat treatment completely  
inhibits the expression of **HSP72** on the cell surface of both  
tumor cells, thus indicating that de novo protein synthesis is required  
for **HSP72** cell surface expression. Since, apart from  
**HSP72**, protein synthesis in general is down-modulated by heat  
shock we speculate that **HSP72** mols. that are expressed on the  
cell surface of tumor cells might be recruited from newly synthesized  
proteins. The heat-inducible **HSP72** cell surface expression on  
tumor cells could be correlated with an increased sensitivity of leukemic  
and sarcoma cells to lysis mediated by NK effector cells. The results of  
cold target inhibition assays revealed that histol. different tumor cells  
(sarcoma and leukemic cells) that we exposed to non-lethal temps. have to  
share a similar if not identical **HSP72** immunogenic determinant.